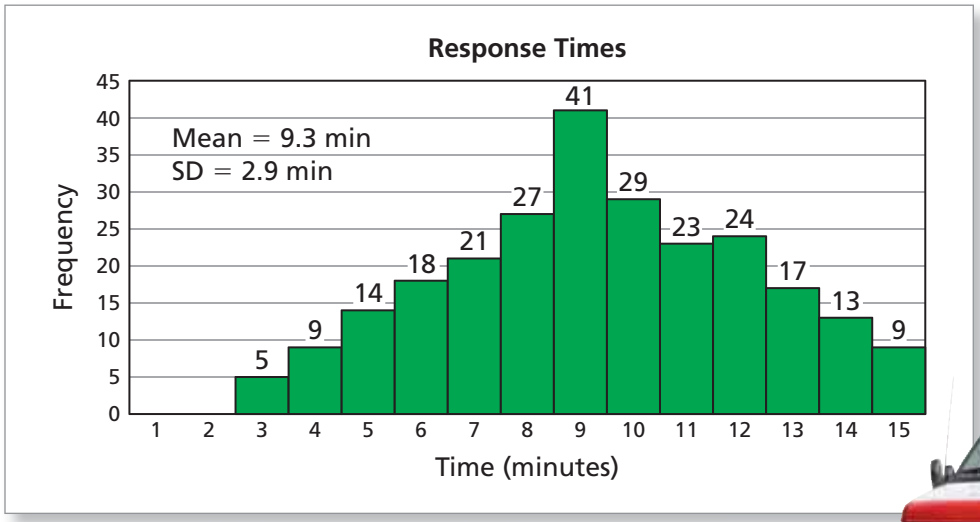
# 9.3–9.4 Quiz

**Ambulance Response Times** **The graph shows the distribution of the ambulance response times for 250 emergency calls in a city. In Exercises 1–6, use the histogram.**




1. Does this data set have a normal distribution? Explain your reasoning.

2. What percent of the response times lie within 1 standard deviation of the mean?

3. What percent of the response times lie within 2 standard deviations of the mean?

4. Compare the percents in Exercises 2 and 3 with the percents given by the normal distribution.

5. Use the *Confidence Interval Calculator* at *Math.andYou.com* and a 95% confidence level to estimate the population mean response time.

6. Use the *Confidence Interval Calculator* at *Math.andYou.com* and a 99% confidence level to estimate the population mean response time.

7. **Fire Station** A city wants to know whether residents will favor a tax increase for the renovation of a fire station. You randomly survey 100 people in the neighborhood around the fire station. Explain why the sample may be biased. Then explain how to find an unbiased sample.

8. **Hospital** You work for a research company. You want to estimate the percent of U.S. adults who have contributed to a hospital fundraiser in the past 12 months. Use the *Sample Size Calculator* at *Math.andYou.com*. Choose a 99% confidence level and a 5% margin of error. How many people should you survey to obtain reliable results?